The background of the entire page is a high-contrast, black and white photograph showing the intricate network of veins in a leaf. The veins are dark and form a complex, branching pattern against a lighter, textured background.

Field Naturalists' Club of Ballarat Inc

August 1998

Meetings are held at the Ballarat Horticulture centre, corner of Gregory and Gillies Streets, ie. the NW corner of the Botanic Gardens, commencing at 7-30pm

Excursions depart from Creswick Plaza at 9-30 am, unless specified otherwise.

President: Mrs Claire Dalman.....

Secretary: Mrs Pat Murphy.....

Editor: Mr Brian Andrews.....

Vice President: Mr Greg Binns.....

Treasurer: Mr John Gregurke.....

Postal Address: PO Box 328W, Ballarat West, 3350

DIARY DATES

Fri 7th August. Meeting. *Study/workshop: a selection of special interest topics.* Club Members.

Sun 9th August. Excursion. *Trust for Nature Reserve, Linton - survey and maintenance activity, also Mt Bute.*

Wed 26th August, Committee Meeting. 7-30pm, Claire Dalmans,

Fri 4th September, Meeting. *Decline in Woodland Birds.*

Speaker Mr Simon Kennedy, Science honours student, Ballarat University.

Sat 5th September, Excursion. *A study of roadside reserves in the Moorabool Shire.* Leader Mr Tim D'Ombrian, LINCOS co-ordinator.

11th - 13th September. *VFNC. Excursions Weekend, Hosted by Castlemaine FNC.* Good speakers, good excursions! APPLICATION FORMS HAVE TO BE POSTED IN AUGUST!

FIELD REPORTS

Mt Elgin Swamp has been purchased by the Victorian Trust for Nature. Looks good. Freckled ducks are found there. First swamp past Nhill, South side of road. Also 7 brown falcons and 5 kestrels between Dimboola and Horsham. John Gregurke.

Mangy, tick infested brush-tailed phascogale, under tent, Kakadu. Carol Hall.

Winter Swamp refilling, some mountain ducks etc. Alan Morrison.

Ring-tailed possum, sleeping in tree hollow - not usual nest. Shepherds Flat, Grenville. Brian Andrews.

Australian gannets, diving. Also black-browed and shy albatross at Barwon Heads. Female pink robin in Fairy land. Ken Hammond.

57 choughs in front of block in Boak St, Frank Harrap. John Mildren also noted that his choughs had been making a hell of a din!

Male rufous whistler in Pleasant Street, Greg Binns.

Raven in Powercorp wires. Maureen.

Right whale with young, Warnambool. Pat Murphy.

Several possum droppings in garden. Helen Burgess.



MOUNT MCKINLEY, THE HIGHEST MOUNTAIN IN NORTH AMERICA, AND THE MULDROW GLACIER

Royal Geographical Society

NORTH TO ALASKA

Carol Hall was our speaker for the July meeting. She explained how continental drift produced the mountains, and in turn how the mountains influenced the climate. The area South of the Alaska Range having a very high level of precipitation, while the area to the North was a virtual desert.

The snow on the mountains produced the glaciers - "rivers" of compressed snow. The glaciers in turn producing characteristic landforms and geological features, all well illustrated and explained by Carol.

The glacier slides were spectacular but Carol didn't forget that we also like birds, animals and flowers! The birds varied from willow ptarmigan - in it's snowy plumage, to the majestic bald eagle. There were red salmon in crystal clear water, sea otters and humpback whales. On land there were arctic ground squirrels, hoary marmets and grizzly bears. There were pretty slides of the flora and resulting berries - Carol pointing out that the cycle from germination to seed production has to take place in only about 3 months!

We were shown the huge liners that carry tourists through the Alaskan waters but Carol obviously didn't travel on one of those - luckily for us!

Carol's talk was an excellent example of the expertise and talent within our club! Thanks!

BDA

BACHUS MARSH GEOTOUR

Heavy overnight rain and strong winds did not deter the participants of this excursion! The first stop was near Mt Egerton where Carol explained that the local landforms are mostly formed by an "icing" of basalt on a "cake" of sedimentary rock. The sedimentary rock was laid down during the Ordovician period (400 - 500 million years ago) and later

uplifted, compressed and folded. Volcanoes spewed out lava in the Pliocene and Pleistocene period about 1 million years ago - covering much of the local area. Volcanoes and "islands" of sedimentary rock, now projecting above the flat basalt layer. The islands of sedimentary rock are usually easily identified by the fact that they are usually still forested.

The next stop was at Woollen Creek. One bank was basaltic, the other sedimentary. Carol explained that lava flows often followed and filled creeks and rivers - the water flow subsequently running along the boundary between the two materials.

After travelling South East across more basalt plain we dipped down into the East Moorabool Valley. The river over millions of years having cut through the basalt icing - followed by large scale erosion of the underlying rock. A major attraction was a large residual rock slab - its bedding planes almost vertical - a testament to the enormous forces that had acted upon it in the past!

Heading for Rowsley, we came to the point where we could look down upon the magnificent view of the Parwan Valley - gouged out due to the action of the Parwan Creek flowing down from the Ballan Sunkland to the Port Phillip Sunkland, which is lower, due to the Rowsley Fault. I made the comment that I was surprised at the apparent lack of raptors - they must have heard! First one wedge-tailed eagle appeared, then another and finally a third! As if that wasn't good enough, one of them apparently found an updraft and proceeded to give a magnificent aerobatic display! With wings at its side, it went into a vertical dive, just as we thought it would splatter into the ground, it turned, opened its wings and rocketed straight up again! It did this two or three times for us!

We stopped for lunch at Maddingly Park which has got some fine tree specimens - although most are exotic. A large cootamundra, covered in bright yellow flowers certainly brightened up the day! A fine pepper tree its trunk about 1.5m in diameter and having long drooping branches reminded Greg of his boyhood - when he used such branches to swing on!

After Janet fed us almond bread and Genni fed us Turkish delight, we headed back along the Ingliston Road. We stopped at the golf course to view the Werribee River valley. Our final stop was a road cutting near the first railway crossing, where we were able to view tillite, deposited by glaciers in Permian times - 250 million years ago.

A couple of us walked to View point for spectacular views of Werribee Gorge.

A beaut day, thanks Carol!

BDA

Helping hand for land

BEFORE European settlement, about one-third of Victoria was grass and grassy woodlands.

The Western Plains, Gippsland Plains and much of the Wimmera were home to unique flora and fauna, including the fat-tailed dunnart and the plains wanderer. But settlement and change have reduced native grassland.

"Many people don't realise that the rarest and



Fat-tailed dunnart

endangered habitats in Victoria are native grasslands and the associated grassy woodlands," said Trust for Nature conservation manager, Dr Barry Traill.

So the Trust and Visy Recycling have released a free 18-page booklet for landowners spelling



Plains wanderer

out the proper management techniques for this unique environment.

Grassy Guidelines is designed to help landowners care for their property and the grasslands.

Shire councils are encouraged to distribute it to ratepayers.

Submitted by Bob Curtain

GRENVILLE AND BACK

It was a cool morning, white frost still in the shady spots and an icicle dangling from our water tank tap!

First stop was Whykes' paddock, just south of Buninyong. There were many fine, old trees - full of hollows. I asked the question - "what were they?" Pat was quick off the mark, replying that they were either swamp or yarra gums. One characteristic of yarra gums is that they have shorter leaves (6 - 10cm), what's more I had a tape measure in my pocket and the longest leaves we could find were 65mm!

It was then off to the Durham, past John Learmonth's original homesite. Morning tea was at our place. Inspection of aerial photographs taken of the area in 1970 and 1990 illustrated a substantial reduction in yarra gum numbers, due presumably to grazing without allowance for regeneration. To my knowledge the trees have never been cut down - but when they fall, they are soon cut up for firewood!

Before leaving we showed the group our Scottish highland cattle and explained how they had been "bred up" from Luining cows and purebred highland bulls, artificial insemination could also have been used.

We had a quick stop at Garibaldi where we looked at river works and tree planting done by locals. We then proceeded along Sand Road to Shepherds Flat before turning down the River Track. We stopped just before the river and equipped with torches we explored an adit - a reminder of our goldmining history. Inside, the patterns of the sedimentary rock and mineral veins seemed more vivid and striking than those exposed to sunlight and weather.

Coming out of the adit we quickly found two koalas - within metres of each other. We then scrambled around a rocky outcrop, admiring the river and scenery as we went.

For lunch we went to Silverlea at Grenville. Over lunch we kept our eyes open for the white goshawk, which is frequently seen there, but it didn't show up.

After lunch it was back to Ballarat, past the snowgums which were almost "cleaned up" as part of War Memorial / Avenue of Honour project undertaken by the locals.

It was a good day and we vowed to go back and explore more of the area later.

BDA

Fly puts bite on boneseed

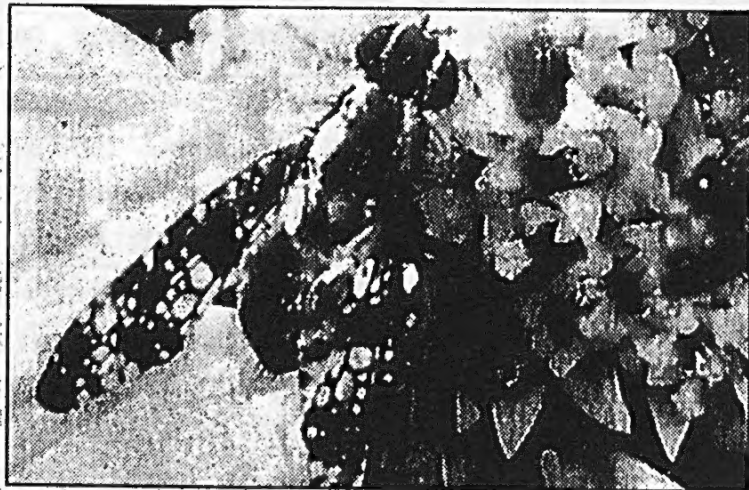
THE fight against boneseed weed took a big step forward this week with the official release of the lacy-winged seed fly.

About 120 insects were released at the You Yangs Regional Park and another 60 in Daveys Bay in Frankston.

Boneseed is one of Victoria's most prolific weeds, creeping across most of the state's west and south and smothering native plants.

Growing up to 2m high in a dense ground cover, the yellow-blossomed boneseed is most damaging on the Mornington Peninsula, and in the You Yangs Regional Park, south-west of Melbourne.

The seed fly was collected in South Africa and bred under quaran-



Savior: a lacy-winged seed fly.

tine at the Keith Turnbull Research Institute, in Frankston and carefully tested to ensure it only attacked boneseed.

The fly is part of a plan to attack boneseed on several fronts.

In New South Wales the tip moth is destroying developing buds, and the tortoise beetle is eating the leaves.

"Other biological control agents being studied include a rust fungus and a leaf roller moth.

"Both show great

promise and are expected to have a devastating effect," the institute's Robin Adair said.

A small number of lacy-winged seed flies were recently released in infestations of bitou bush, a close relative of boneseed, in NSW.

It has spread through bitou bush growth in NSW at a rate of 400km a month, infesting up to 80 per cent of flower heads and reducing its seeding by up to 40 per cent.

- MARK WEMBRIDGE

Also
from
BC

MAMMALS OF BALLARAT...No31...MAN

Man Homo sapiens sapiens.

Order Primate, Genus Homo, Superfamily Hominidae,

Family Sapiens (meaning wise.)

Ethnic Group Australoid.

The Aboriginal people have been in Australia for 40,000 or so years, they were here when the mega fauna were the main mammals. From old sites such as Lake Mungo, Kow Swamp and others, we know what their main food items were, among them was the animal known to us as the Tasmanian Devil.

Although these first people were Homo sapiens, there were other races of Homo until about 35,000 years ago, Homo sapiens has been on the earth for 250,000 years.

The people that inhabited the Ballarat region were a family or totem group of a tribe known as the Kulin. Their territory was bounded by the mouth of the Werribee River to Bachus Marsh, then North to the Dividing Range, on to the North of Lakes Burrumbete and Learmonth and then S.E. to Geelong and the shores of Port Phillip Bay.

Thomas Hastie, the first minister at Buninyong, said they were numerous in 1840, but the settlers with their thousands of sheep and kangaroo hunts destroyed their way of life. They became fringe dwellers, living on handouts. The finding of gold seems to have overwhelmed them and accelerated their extermination. The last of them is buried in the new cemetery.

They were a small people, about 168cm for men and smaller females. They were not a warlike people but occasionally aggressive. The district nomenclature is interesting :- Bonin Yowang (Buninyong), Gong Gong (Gang Gang) - after the cockatoo, Wareenheip (Warrenheip), Laal Laal (Lal Lal), Wendaree (Wendouree) and of course Ballaarat (Ballarat)

This ends the series. Books used for reference were "The Complete Book of Australian Mammals", edited by Ronald Strahan, Various Histories of Ballarat and "The Making of Man" by Richard Leakey.

Elfin

ARAUCARIACEAE

Having seen the Araucarias growing at Allan Sonsee's garden, another near family of the Araucaria needs to be noted. This is the family of trees called AGATHIS, a remarkable genus of large conifers scattered throughout the South West Pacific area and the Malay Peninsula. Nearly all of them have massive trunks and broad leathery leaves, quite unlike the needles of more familiar conifers. These trees are marginally frost

hardy.

Agathis is a Greek word, meaning a ball of twine. Kauri is the Polynesian name for them. There are 20 or more species throughout this area. The ones we are interested in grow in New Zealand (1) and Australia and New Guinea (1). The tree in N.Z. is *Agathis australis* and is valued for its very fine wood. The Maoris made canoes from their massive trunks. The Australian and N.G. tree is *Agathis robusta*. They grow to a height of 45m with a diameter of 6m. This is also a very important timber tree. The resin was used for varnish. They like a moderate climate (Aust), to a warm temperate climate (N.Z.)

A relation of these trees is the newly found wollemi pine, *WOLLEMIA nobilis*. L.F.

JULY POSER...CONIFEROUS SPIRALS

I obtained the following results:-

SPECIES	CW spirals	ACW	No
Monterey Pine	13	8	3
Mexican Pine	8	13	1
Western Yellow Pine	5	8	1
Big Tree, S. ico'	5	3	1
Redwood, S. sem'	3	5	1
Noble Spruce	5	3	1
Sitka Spruce	8 irregular		1
Douglas Fir	3	2	1
	3	3	1
	2	3	1

Obviously a much larger sample would be needed to consider results conclusive, but :-

(i) For any conifer* the number of spirals is different in each direction.

(ii) From the Monterey Pine it would seem that the numbers are constant within a species*.

(iii) Different species obviously have different numbers of spirals.

(iv) If you arrange the spiral numbers in order of increasing size, you get :- 2,3,5,8,13 ie each number is the sum of the two previous numbers! These numbers are part of the famous Fibonacci Series - 0,1,1,2,3,5,8,13,21,34 etc !

* The results for Sitka Spruce and Douglas Fir are unreliable due to the fragile nature of the cones.

BDA

AUGUST POSER. Claire wants to know why birds "ant" themselves!
All ideas will be gratefully accepted and printed!

BDA